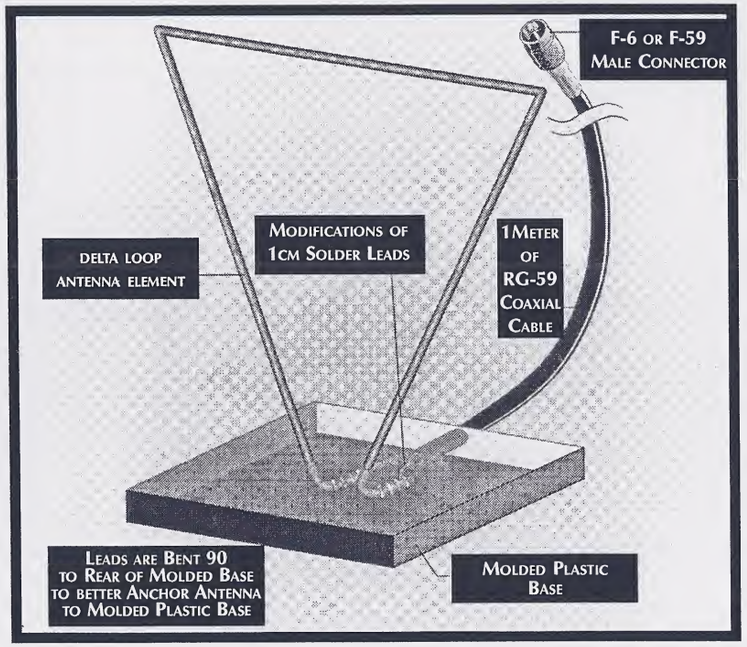
DELTA LOOP INDOOR TV ANTENNA

Indoor antenna enhances UHF off-air TV signals



DESIGN ADVANTAGES:

- Improves off-air UHF reception for existing and future high-definition TV's, with limited reception on VHF high-band channels
- Makes it possible for owners of TV's with single 75-OHM antenna input to obtain UHF off-air reception of local UHF TV stations that cable or satellite systems do not provide
- Works with many low-power TV stations and with amateur TV stations in the 70 cm UHF amateur radio band
- Unit is matched for 75 OHM antenna impedance and has a limited number of passive components to help provide the best indoor UHF reception
- Could be use as a temporary antenna when cable TV is out
- Addresses needs of apartment tenants prohibited from having outdoor antennas
- Designed for easy installation by do-it-yourselfers
- Producible in larger versions to accommodate VHF TV or FM bands

DESIGN FEATURES:

- Indoor UHF TV antenna offers a direct connection to a TV or VCR via a standard F-connector and a 1m long, 75 OHM coaxial cable (RG-59, RG-6, etc.)
- This direct coaxial cable connection offers up to a 6-decibel improvement in signal strength by eliminating the need for a 4:1 matching broadband transformer
- Unit is configured as an invented delta loop with a vertical physical orientation and horizontal polarization relative to the received electromagnetic signals
- Unit's 10cm square by 1cm deep base provides mechanical strength to antenna element and coaxial cable connection
- Receiving antenna element is producible from 14-gauge, hard-drawn steel, copper or brass rod
- Lead spacing and length from coaxial connection point is 1cm before the inverted delta arms assume their 28-degree separation angles (56 degrees total); leads are bent 90 degrees to better anchor delta loop in molded plastic base

CONTACT INFORMATION

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- Remaining two angles of inverted delta base intersection are each 62 degrees
- Total length of the full-wave antenna element is approximately 62cm, to be consistent with the standard textbook formula (1 wavelength in feet = 1005/ FMHz) for a full-wave loopantenna at lower end of UHF TV band (channels 14 through 69)
- Unit may also offer more limited reception capability for the VHF TV and FM broadcast bands
- Equipment is simply placed atop TV and connected to TV sets RF input connector

DEVELOPMENT:

- Prototype available

TARGET MARKETS:

- Households
- Residents of Urban Areas/Apartment Tenants; Residents of Smaller Communities with Single LPTV Stations or UHF Translators

MARKETING OUTLETS:

- Electronics/appliance stores
- Department and discount department stores
- Infomercials
- Internet web sites
- Wholesalers of appliances
- Mail-order catalogs

SIC CODES:

- 3679
- 3651

U.S. Patent #6,342,862

Writers Initials: BC REV. 4/4/01